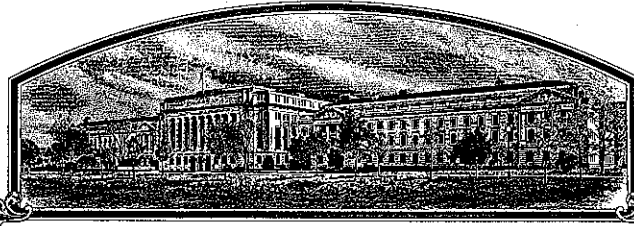


No.

9800102



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Virginia Agricultural Experiment Station

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED, PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

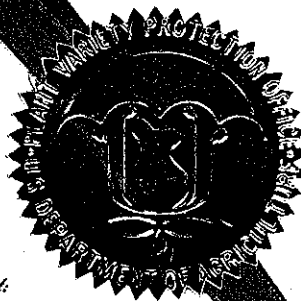
NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN THE UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS A CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE SEED. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

WHEAT, COMMON

'Pocahontas'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this thirty-first day of January, in the year of our Lord two thousand.

Attest:



Ann Marie Thro

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

Don Gilman

Secretary of Agriculture


U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE DIVISION - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act 1974 (5 U.S.C. 552a).

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME
Virginia Agricultural Experiment Station		VA93-52-60	Pocahontas
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country)		5. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY PVPO NUMBER 9800102 DATE 2-6-1998 FILING AND EXAMINATION FEE \$ 2450 DATE 2/6/98 CERTIFICATION FEE \$ 300 DATE 11/23/98
Virginia Polytechnic Institute and State Univ. College of Agriculture and Life Sciences 104 Hutcheson Hall Blacksburg, VA 24061-0402		6. FAX (include area code) 540-231-4163	
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Botanical)		
Triticum aestivum L.	Gramineae		
9. CROP KIND NAME (Common name)			
Wheat, common			
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) (Common name)			
Agricultural Experiment Station of Virginia Tech			
11. IF INCORPORATED, GIVE STATE OF INCORPORATION		12. DATE OF INCORPORATION	
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS			14. TELEPHONE (include area code)
Carl A. Griffey Crop and Soil Environmental Sciences Virginia Tech Blacksburg, VA 24061-0404			540-231-9789
			15. FAX (include area code)
			540-231-3431
16. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse)			
a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of the Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Applicant's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties verification that tissue culture will be deposited and maintained in a public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$2,450), made payable to "Treasurer of the United States" (Mail to PVPO)			
17. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY, AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act?)			
<input checked="" type="checkbox"/> YES (If "yes," answer items 18 and 19 below) <input type="checkbox"/> NO (If "no," go to item 20)			
18. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS?		19. IF "YES" TO ITEM 18, WHICH CLASSES OF PRODUCTION BEYOND BREEDER SEED?	
<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		<input checked="" type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input checked="" type="checkbox"/> CERTIFIED	
20. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELEASED, USED, OFFERED FOR SALE, OR MARKETED IN THE U.S. OR OTHER COUNTRIES?			
<input checked="" type="checkbox"/> YES (If "yes," give names of countries and dates) <input type="checkbox"/> NO			
Foundation seed was sold to certified seed growers in Fall 1997.			
21. The applicant(s) declare that a viable sample of basic seed of the variety will be furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.			
The undersigned applicant(s) is(are) the owner(s) of this asexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.			
Applicant(s) is(are) informed that false representation herein can jeopardize protection and result in penalties.			
SIGNATURE OF APPLICANT (Owner(s))		SIGNATURE OF APPLICANT (Owner(s))	
			
NAME (Please print or type)		NAME (Please print or type)	
R. Q. Cannell			
CAPACITY OR TITLE	DATE	CAPACITY OR TITLE	DATE
Director, VAES	2-1-98		

Pocahontas Wheat

14A. Exhibit A: Origin and Breeding History

Genealogy and Breeding Method. Pocahontas, formerly designated VA 93-52-60, was derived as an F₅ head selection made in 1991 from the cross 'Wheeler'*2/C39// 'Saluda' and was approved for release February 1997. The cross was completed in 1985, and the population was advanced using a modified bulk breeding method. Advancement of the population during the F₂ through F₄ generations was made by selecting phenotypically-desirable heads (tapering or strap in shape and clean in appearance) at maturity from plants that were short in plant height. Heads selected in each generation were bulk-threshed and seed were planted in a 225 ft² block in each subsequent fall. The C39 parent originated in England and was selected from the 1982 International Winter Wheat Mildew Nursery as a source of resistance to powdery mildew. The major criterion used in selection of Pocahontas wheat was resistance to powdery mildew (*Blumeria graminis*).

Population Advancement and Selection of the Variety. The segregating population was advanced from the F₂ to the F₅ generation using a modified bulk breeding method. Spikes were harvested from the population in the F₅ generation, and were threshed individually and planted in single 4 ft headrows. Pocahontas was derived in 1991 from one of the headrows selected for earliness of heading, short plant height, and resistance to powdery mildew. This pure line was evaluated in single 45 ft² observation plots at two locations in 1992, and in replicated preliminary yield plots at three locations in 1993. It was evaluated in state-wide yield tests from 1994 to 1996, and in the Uniform Southern Soft Red Winter Wheat Nursery in 1994 and 1995.

Multiplication and Purification. Within the limits of biological expectation, Pocahontas has remained stable and uniform in composition through seven generations of selfing. In the fall of 1995, seed derived from 144 F₁₀ headrows of Pocahontas was planted in 45 ft² plots at the VCIA Foundation Seed Farm. Each plot was visually assessed for genotype and homogeneity. Prior to harvest, 15 variant plots were removed, and the remaining 129 plots were combine-harvested in bulk to form the Breeder seed. This seed was planted on 19 acres at the Foundation Seed Farm in the fall of 1996 for production of Foundation seed. While Pocahontas is a rather pure variety, a small percentage (0.05%) of plants that are 10 to 12 inches (25-30 cm) taller in height are observed in this variety.

Pocahontas Wheat

14B. Exhibit B: Novelty Statement

Pocahontas is uniquely different from all known wheat cultivars, but is most similar to its parent Saluda (Tables 1-4). Head emergence (50% of spikes emerged from boot) of Pocahontas is earlier than that of Saluda. Over the past three years, Pocahontas headed 2-3 days earlier than Saluda (L.S.D. 0.05 = 1.0). Pocahontas is resistant to isolates of powdery mildew (*Blumeria graminis*) with virulence to *Pm3a*, while Saluda which possess *Pm3a* is susceptible. Data from Virginia reported as results of the 1994 and 1995 Uniform Southern Soft Red Winter Wheat Nurseries, showed that Pocahontas was resistant to mildew composites with virulence for *Pm1*, 3a, 3b, 3c, 4a, 5, 6, 7 and 8, while Saluda was susceptible. Therefore, Pocahontas differs from Saluda in genes governing resistance to powdery mildew. Neither the exact number nor identity of genes governing mildew resistance in Pocahontas are known, but from its parentage it potentially could have inherited *Pm3a* from Saluda as well as *Pm2*, 4b and 6 from C39. Results of the 1994-95 International Winter Wheat Powdery Mildew Nursery indicate that one of the genes governing mildew resistance in Pocahontas is likely *Pm4b* as Pocahontas was resistant to isolate Wkin91 which has virulence to *Pm1*, 2, 3a, 3c, 3e, 5, 6, 7, 16 but not to *Pm3b*, 4a, 4b, 8, 12, 17. In state-wide yield trials, Pocahontas and Saluda had corresponding mildew scores (0-9 scale where 0=no infection, 9=nearly 100% leaf area infected) of 0 vs 6 in 1996 and 1 vs 4 in 1995 (L.S.D. 0.05 = 1.0). In 1994 trials, Pocahontas had 0% infected leaf area, while Saluda had 40% mildew severity (L.S.D. 0.05 = 5.0). Data from the USDA-ARS Cereal Rust Lab indicates that Pocahontas is resistant to stem rust (*Puccinia graminis*) races QFBS and RKQS, while Saluda is susceptible.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK AND SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Wheat)

OBJECTIVE DESCRIPTION OF VARIETY
WHEAT (TRITICUM SPP.)

INSTRUCTIONS: See Reverse.

NAME OF APPLICANT(S)

Virginia Agricultural Experiment Station

ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)

Virginia Tech
College of Agriculture and Life Sciences
104 Hutcheson Hall
Blacksburg, VA 24061-0402

FOR OFFICIAL USE ONLY

PVPO NUMBER 3600102

VARIETY NAME OR TEMPORARY
DESIGNATION

Pocahontas

Place the appropriate number that describes the varietal character of this variety in the boxes below.
Place a zero in first box (e.g., 0 8 9 or 0 9) when number is either 99 or less or 9 or less.

1. KIND:

1 1 = COMMON 2 = DURUM 3 = EMMER 4 = SPELT 5 = POLISH 6 = POULARD 7 = CLUB

2. TYPE:

2 1 = SPRING 2 = WINTER 3 = OTHER (Specify) 1 1 = SOFT 3 = OTHER (Specify)
2 = HARD

2 1 = WHITE 2 = RED 3 = OTHER (Specify)

3. SEASON - NUMBER OF DAYS FROM EMERGENCE TO:

FIRST FLOWERING

LAST FLOWERING

4. MATURITY (50% Flowering):

0 3 NO. OF DAYS EARLIER THAN 7 1 = ARTHUR 2 = SCOUT 3 = CHRIS

0 1 NO. OF DAYS LATER THAN 8 4 = LEMHI 5 = HUGAINE 6 = LEEDS
7 = Jackson 8 = Pioneer 2691

5. PLANT HEIGHT (From soil level to top of head):

0 8 . 6 CM. HIGH

0 3 CM. TALLER THAN 8 7 = Jackson 8 = Pioneer 2691

0 5 CM. SHORTER THAN 7 1 = ARTHUR 2 = SCOUT 3 = CHRIS
4 = LEMHI 5 = HUGAINE 6 = LEEDS

6. PLANT COLOR AT BOOTING (See reverse):

2 1 = YELLOW GREEN 2 = GREEN 3 = BLUE GREEN

7. ANTHUR COLOR:

1 1 = YELLOW 2 = PURPLE

8. STEM:

1 Anthocyanin: 1 = ABSENT 2 = PRESENT

2 Waxy bloom: 1 = ABSENT 2 = PRESENT

1 Hairiness of last internode of rachis: 1 = ABSENT 2 = PRESENT

1 Internodes: 1 = HOLLOW 2 = SOLID

0 5 NO. OF NODES (Originating from node above ground)

2 2 CM. INTERNODE LENGTH BETWEEN FLAG LEAF AND LEAF BELOW

9. AURICLES:

2 Anthocyanin: 1 = ABSENT 2 = PRESENT

1 Hairiness: 1 = ABSENT 2 = PRESENT

10. LEAF:

1 Flag leaf at booting stage: 1 = ERECT 2 = RECURVED
3 = OTHER (Specify):

2 Flag leaf: 1 = NOT TWISTED 2 = TWISTED

1 Hairs of first leaf sheath: 1 = ABSENT 2 = PRESENT

2 Waxy bloom of flag leaf sheath: 1 = ABSENT 2 = PRESENT

1 1 MM. LEAF WIDTH (First leaf below flag leaf)

1 9 CM. LEAF LENGTH (First leaf below flag leaf):

11. HEAD:

1 Density: 1 = LAX 2 = DENSE

1 Shape: 1 = TAPERING 2 = STRAP 3 = CLAVATE
4 = OTHER (Specify)

9800102

2 Awnedness: 1 = AWNLESS 2 = APICALLY AWNLETED 3 = AWNLETED 4 = AWNED

2 Color at maturity: 1 = WHITE 2 = YELLOW 3 = PINK 4 = RED
5 = BROWN 6 = BLACK 7 = OTHER (Specify):

0 8 CM. LENGTH

1 0 MM. WIDTH

12. GLUMES AT MATURITY:

2 Length: 1 = SHORT (CA. 7 mm.) 2 = MEDIUM (CA. 8 mm.)
3 = LONG (CA. 9 mm.)3 Width: 1 = NARROW (CA. 3 mm.) 2 = MEDIUM (CA. 3.5 mm.)
3 = WIDE (CA. 4 mm.)2 Shoulder shape: 1 = WANTING 2 = OBLIQUE 3 = ROUNDED
4 = SQUARE 5 = ELEVATED 6 = APICULATE

1 Beak: 1 = OBTUSE 2 = ACUTE 3 = ACUMINATE

13. COLEOPTILE COLOR:

2 1 = WHITE 2 = RED 3 = PURPLE

14. SEEDLING ANTHOCYANIN:

1 = ABSENT 2 = PRESENT

15. JUVENILE PLANT GROWTH HABIT:

2 1 = PROSTRATE 2 = SEMI-ERECT 3 = ERECT

16. SEED:

1 Shape: 1 = OVATE 2 = OVAL 3 = ELLIPTICAL

1 Cheek: 1 = ROUNDED 2 = ANGULAR

2 Brush: 1 = SHORT 2 = MEDIUM 3 = LONG

1 Brush: 1 = NOT COLLARED 2 = COLLARED

2 Phenol reaction (See instructions): 1 = IVORY 2 = FAWN 3 = LT. BROWN
4 = BROWN 5 = BLACK

3 Color: 1 = WHITE 2 = AMBER 3 = RED 4 = PURPLE 5 = OTHER (Specify)

0 6 MM. LENGTH

0 3 MM. WIDTH

4 0 GM. PER 1000 SEEDS

17. SEED CREASE:

1 Width: 1 = 60% OR LESS OF KERNEL 'WINOKA'
2 = 80% OR LESS OF KERNEL 'CHRIS'
3 = NEARLY AS WIDE AS KERNEL 'LEMHI'1 Depth: 1 = 20% OR LESS OF KERNEL 'SCOUT'
2 = 35% OR LESS OF KERNEL 'CHRIS'
3 = 50% OR LESS OF KERNEL 'LEMHI'

18. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

1 STEM RUST (Races) TNMK

1 LEAF RUST (Races)

0 STRIPE RUST (Races)

0 LOOSE SMUT

2 POWDERY MILDEW

0 BUNT

1 OTHER (Specify)

Wheat spindle streak virus

19. INSECT: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)

0 SAWFLY

1 APHID (Bydov 9-233)

0 GREEN BUG

1 CEREAL LEAF BEETLE

1 OTHER (Specify) HF Race L

HESSIAN FLY

2 GP

0 A

1 B

1 C

1 D

2 E

0 F

0 G

20. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED:

CHARACTER	NAME OF VARIETY	CHARACTER	NAME OF VARIETY
Plant tillering	Saluda	Seed size	Saluda
Leaf size	Saluda	Seed shape	Saluda
Leaf color	Saluda	Coleoptile elongation	Saluda
Leaf carriage	Saluda	Seedling pigmentation	Saluda

INSTRUCTIONS

GENERAL: The following publications may be used as a reference aid for the standardization of terms and procedures for completing this form:

- (a) L.W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, United States Department of Agriculture.
- (b) W.E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts. (See attachment.)

Pocahontas Wheat

14D. Exhibit D: Additional Description of Pocahontas

Since Pocahontas has not been tested in comparison with any of the six cultivars listed in Exhibit C, average data on performance in Virginia from 1994 to 1996 are presented in Tables 1-4. Pocahontas is an early-heading, high yielding, apically-awnleted soft red winter wheat with resistance to powdery mildew. Head emergence is one to two days earlier than the most widely grown early wheats and four days earlier than 'Jackson' and 'FFR 555W' (Tables 2-4). Plant height of Pocahontas is 35 inches, which is similar to FFR 555W and one to two inches shorter than Jackson. Pocahontas has good straw strength, and is superior to Jackson in this aspect. Based on parentage and limited data, winter hardiness of Pocahontas is moderate, being similar to that of Saluda and Jackson. Average grain test weight of Pocahontas is 57.7 lb/bu and is similar to that of Jackson. Pocahontas has very good milling quality with high flour yields, and baking quality is satisfactory (Table 5). Milling quality is superior and baking quality is similar to that of Saluda. Pocahontas has better milling and baking quality than 'Pioneer 2548'.

Pocahontas is resistant to the prevalent strains of powdery mildew in the mid-Atlantic region, and has a moderate level of resistance to leaf and glume blotch (*Stagonospora nodorum*). It is moderately susceptible to the prevalent races of leaf rust (*Puccinia recondita*), and to wheat spindle streak and barley yellow dwarf viruses. While Pocahontas exhibits resistance to five races of stem rust, it is susceptible to the most prevalent race TNMK. Pocahontas is resistant to Hessian fly biotypes GP and E, but is susceptible to the most prevalent biotype L.

Table 1. Three year average yield performance of entries in the Virginia Tech Wheat Tests, 1994, 1995, and 1996.*

Brand/Variety	Blacksburg	Blackstone	Holland	Painter	Warsaw	Orange	Average
	bu/a						
PIONEER 2580-B	89 +	79	76	92 +	88 +	87 +	86 +
POCAHONTAS	87 +	83	78	95 +	82	78	84 +
JACKSON	87 +	79	77	94 +	81	80	83 +
FFR555W-B	85 +	81	76	86	77	83	82 +
PIONEER 2684-B	85 +	78	72	90	83	78	81
MADISON	82	74	70	83	83	70 -	77 -
COKER 9803	79	76	71	82	72 -	77	76 -
SALUDA	78	67 -	69 -	77 -	69 -	80	74 -
LSD (0.05)	4	8	6	5	6	5	2
Location Average	81	78	75	86	81	80	80
Statewide Average	80						

* A plus or minus sign indicates a performance significantly above or below the test average, respectively.

Table 2. Summary of performance of entries in the Virginia Tech Wheat Test, 1995-96.*

Brand/Variety	Yield (Bu/A)	Test Weight (Lb)	Date Headed (Mar 31+)	Height (In)	Lodging** (0.2-10)	Powdery Mildew (0-9)☆	Leaf Rust (0-9)	Leaf□ Blotch (0-9)	Glume□ Blotch (0-9)
	(6)	(6)	(4)	(3)	(6)	(2)	(1)	(2)	(1)
POCAHONTAS	89 +	56.9	35 -	33 -	2.9	0 -	0 -	2 -	2 -
JACKSON-B	87 +	57.1 +	37 +	34	5.7 +	1 -	0 -	3	2 -
PIONEER 2580-B	85	57.0	35 -	34	1.6 -	1 -	0 -	3	2 -
PIONEER 2684-B	84	58.8 +	35 -	34	2.0 -	1 -	2	3	2 -
FFR555W-B	84	55.8 -	38 +	33 -	2.3	5 +	7 +	3	6 +
MADISON	82	56.9	36	36 +	2.5	2	3 +	5 +	2 -
COKER 9803	78 -	58.4 +	35 -	32 -	4.3 +	4 +	3 +	4 +	4 +
SALUDA	75 -	57.6 +	37 +	33 -	3.4	6 +	3 +	3	3
LSD (0.05)	4	0.6	1	1	1.0	1	1	1	1
Test Average	82	56.5	36	34	3.2	2	2	3	3

* The number in parentheses below column headings indicates the number or locations on which data are based.

A plus or minus sign indicates a performance significantly above or below the test average, respectively.

** Belgian Lodging Scale = Area x Intensity x 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat lying totally flat.

☆ All 0-9 ratings indicate relative disease intensity where 0=none and 9=total plant infection.

□ Septoria leaf and glume blotch in these cases were caused by Stagonospora nodorum.

Table 3. Summary of performance of entries in the Virginia Tech Wheat Test, 1994-95.*

Brand/Variety	Yield (Bu/A)	Test Weight (Lb)	Date Headed (Mar 31+)	Height (In)	Lodging** (0.2-10)	Powdery Mildew (0-9)*	Leaf Rust (0-9)	Septoria	Glume Blotch (0-9)	BYD Virus (0-9)
								Leaf Blotch (0-9)		
	(6)	(6)	(4)	(5)	(2)	(3)	(3)	(1)	(1)	(3)
PIONEER 2580-B	89 +	56.0	27 -	33 -	1.2	1	3	5 +	3 +	4
JACKSON	84 +	57.4	29	36 +	3.5 +	1	3	2 -	1 -	4
PIONEER 2684-B	82 +	58.2 +	27 -	33 -	0.3 -	1	4 +	2 -	1 -	4
POCAHONTAS	78	57.9 +	26 -	34	0.9	1	4 +	4 +	2	5 +
FFR555W-B	76	56.1	31 +	35 +	0.7	2 +	5 +	2 -	2	4
COKER 9803	76	58.3 +	28 -	33 -	2.7	1	3	4 +	2	4
MADISON	76	56.7	27 -	35 +	1.2	2 +	5 +	2 -	2	3 -
SALUDA-B	73	57.9 +	29	34	1.3	4 +	4 +	3	2	5 +
LSD (0.05)	6	0.9	1	1	1.4	1	1	1	1	1
Test Average	75	56.7	29	34	1.8	1	3	3	2	4

* The number in parentheses below column headings indicates the number of locations on which data are based. A plus or minus sign indicates a performance significantly above or below the test average, respectively.

** Belgian Lodging Scale = Area x Intensity x 0.2. Area = 1-10, where 1 is wheat unaffected and 10 is entire plot affected and Intensity = 1-5, where 1 is wheat standing upright and 5 is wheat lying totally flat.

* The 0-9 ratings indicate relative disease intensity where 0=none and 9=total plant infection.

Table 4. Summary of performance of entries in the Virginia Tech Wheat Test, 1993-94.*

Brand/Variety	Yield (Bu/A)	Test Weight (Lb)	Date Headed (Mar 31+)	Height (in)	Lodging (%)	Leaf Rust (%)	Powdery Mildew (%)	Soil Virus (0-5)	Leaf Septoria (0-9)
	(7)	(7)	(3)	(3)	(4)	(2)	(2)	(1)	(2)
COKER 9803	73 -	59.9 +	32 -	34 -	1	4	21 +	0	2 -
FFR555W-B	82 +	57.0 -	35 +	37	1	4	16 +	0	2 -
JACKSON	84 +	59.2 +	34 +	38 +	4	4	15 +	0	2 -
MADISON	79	57.4 -	32 -	38 +	1	0	20 +	0	3
PIONEER 2580	83 +	57.7 -	32 -	37	0	1	4 -	0	2 -
PIONEER 2684	78	59.7 +	31 -	37	1	1	11	0	1 -
SALUDA-B	81	59.6 +	33	37	2	3	24 +	2	3
POCAHONTAS	88 +	58.4	30 -	37	6	4	0 -	0	2 -
LSD (0.05)	3	0.5	1	1	5	4	5	2	1
Test Average	79	58.5	33	37	2	3	10	1	3

* The number in parentheses below column headings indicates the number of locations on which data are based. A plus or minus sign indicates a performance significantly above or below the test average, respectively.

Table 5. Milling and Baking Quality of Pocahontas Wheat.

1993-94 Uniform Southern Wheat Nursery

<u>Quality Trait:</u>	<u>Milling Score</u>		<u>Baking Score</u>		<u>Flour Yield</u>	
<u>Test Region:</u>	North	South	North	South	North	South
Pocahontas	105.6	102.8	107.0	90.1	73.7	73.1
Florida 302	107.0	102.4	109.8	98.1	73.4	72.3
Saluda	104.1	96.0	104.4	92.2	71.6	71.3
Coker 9835	102.5	97.6	97.7	98.2	71.3	70.1

<u>Quality Trait:</u>	<u>Softness Score</u>		<u>AWRC Score</u>		<u>Cookie Diameter</u>	
<u>Test Region:</u>	North	South	North	South	North	South
Pocahontas	59.4	54.9	56.4	57.0	17.99	17.31
Florida 302	61.8	57.7	55.5	53.9	18.29	17.37
Saluda	62.8	52.1	57.6	55.2	17.83	17.35
Coker 9835	67.8	62.8	60.2	60.0	18.36	18.01

Table 5 con't. Milling and Baking Quality of Pocahontas Wheat.

1994-95 Uniform Eastern Wheat Nursery

<u>Quality Trait:</u>	<u>Milling Score</u>			<u>Baking Score</u>			<u>Flour Yield</u>		
Test Region:	North	Atlantic	South	North	Atlantic	South	North	Atlantic	South
Pocahontas	101.0	100.9	100.0	86.5	84.6	80.3	72.9	73.1	72.6
Cardinal	100.1	93.5	99.0	92.0	77.9	89.3	71.6	70.0	71.3
Caldwell	101.3	104.1	94.6	97.3	98.4	104.6	71.1	71.7	69.7
Pioneer 2548	92.5	88.5	91.8	75.4	60.0	74.8	69.2	68.6	69.3

<u>Quality Trait:</u>	<u>Softness Score</u>			<u>AWRC Score</u>			<u>Cookie Diameter</u>		
Test Region:	North	Atlantic	South	North	Atlantic	South	North	Atlantic	South
Pocahontas	54.5	54.3	54.5	54.7	53.6	54.7	17.98	17.75	17.68
Cardinal	57.8	58.5	59.8	51.8	54.2	52.7	17.81	17.33	17.63
Caldwell	62.0	64.4	65.4	52.7	54.0	53.4	17.92	18.04	18.22
Pioneer 2548	59.6	58.1	60.1	56.0	57.0	55.4	17.40	16.85	17.27

Pocahontas Wheat**14E. Exhibit E: Basis of Applicant's Ownership**

The owner of Pocahontas wheat is Virginia Tech, of which the Virginia Agricultural Experiment Station is a part. Employees charged with developing this new variety as a condition of their employment understand that ownership resides with Virginia Tech pursuant to university policy on intellectual property.